



HARDWARE AND SOFTWARE PROBES

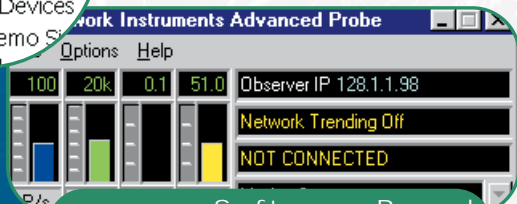


Hardware-Based Rack-Mount Probe

HIGH PERFORMANCE SOFTWARE- OR HARDWARE-BASED PROBES FOR OBSERVER

MONITOR YOUR ENTIRE NETWORK FROM A SINGLE CONSOLE WITH OBSERVER'S PROBES

- Local Ob
- WAN WAN Probes
- G Gigabit Ethernet
- R RMON Probes
- SNMP SNMP Devices
- Demo S



Software-Based Advanced/Gigabit Probe



Full-Featured Observer Probes Provide Complete Visibility into Your Network

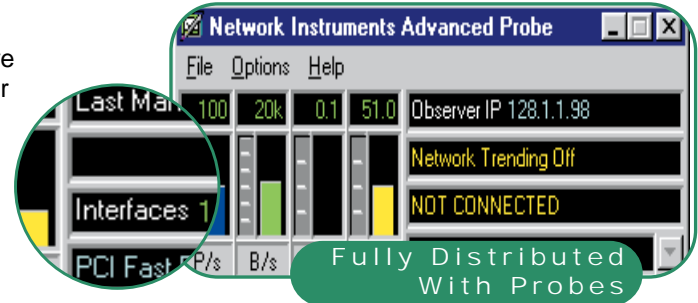
Collect data from any network or switch and view results within the Observer Console with Network Instruments' Probes:

- Low cost, complete Observer data collection for remote sites, local or remote networks, or switches
- Software-only options for Ethernet, 802.11, Token Ring and FDDI
- Hardware-based options for gigabit and WAN monitoring
- RMON 1 or 2 mode, or Advanced
- Auto-update feature updates remote Probes automatically
- A web accessible quick snapshot
- Full password protection of data and re-direction
- Monitor your entire network from within a single interface

Monitor Remote LANs, WLANs or WANs by Adding Probes to Observer

With the Distributed by Design architecture of Observer one can economically view statistics in real-time, collect long-term trending and capture/decode packets for in-depth analysis on remote networks, just as if you were there. Observer provides a "single console" view for LAN, WLAN and WAN Probes, allowing you to monitor your entire network from a single interface.

Whether you have remote offices or multiple network closets, Probes offer the full functionality of Observer without the sacrifice of travel time.



10/100/Gigabit Ethernet, 802.11, Token Ring and FDDI Probes

Software-based Probes are appropriate for network speeds up to 100 MB (Ethernet, Token Ring, FDDI, and 802.11 Wireless) and are a good solution for monitoring low utilization gigabit networks via a monitor port on a switch.

Observer's software-based Probes can operate in one of two modes: RMON or Advanced.

The RMON Probe—An industry-standard RMON1/2 compliant Probe application. All 19 RMON groups are supported with full adherence to all RFCs. RMON Probes can support up to 10 interfaces. A Probe running RMON mode can report to any RMON or SNMP management console that supports RMON/2. RMON Probes can also be run as a service on NT/2000/XP.

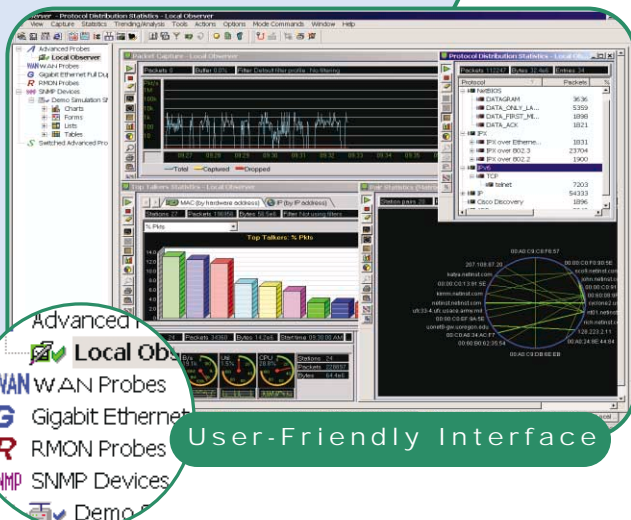
The Advanced Probe—Offers a superset of RMON functionality. The Probe software runs on a standard non-dedicated Windows NT/2000/XP PC and requires no additional hardware. An Advanced Probe can be run as a service. Advanced Probes may also run unattended, collecting network statistics for later retrieval by an Observer console. Advanced Probes can be remotely auto-updated.

Gigabit Probes

Hardware-based gigabit Probes are specifically for administrators who require wire-speed, full-duplex gigabit capture. A gigabit Probe provides a direct passive link into the data stream offering an independent and trusted view of network traffic.

Gigabit Probes provide gigabit analysis, statistics, trending and reporting capabilities to any Expert Observer or Observer Suite console. Gigabit Probes combine high performance analysis with the very best price/performance ratio in the industry.

All gigabit Probes include TAPs that provide a copy of the gigabit signal to the analyzer, while maintaining the signal through the network connection. Once a TAP is added to a network, the Probe can be attached or removed without data interruption. TAPs can be



added to multiple gigabit links allowing for hot swapping of the analyzer.

For gigabit Probes, the capture hardware is based on a dual receive gigabit adapter that Network Instruments manufactures specifically for the purpose of wire-speed, full-duplex network analysis. These specially designed cards combine the send and receive channels into a single time-stamped data stream, without using valuable CPU cycles, allowing the analyzer to decode the data at wire speeds.

The software that drives the gigabit Probe is based in the Windows 2000/XP environment and integrates perfectly with all security and policy based schemes that may be in place. There is no need to learn a new operating system or integrate some foreign operating system into your network. If you know how to administer Windows, you already know how to work with Network Instruments' Probes.

Hardware-Based gigabit Probes are available in two formats. Each option has been designed to give the administrator flexibility in implementation and performance.

Gigabit Probe Kit



1. The Gigabit Probe Kit

The Gigabit Probe Kit includes:

- Network Instruments' 64-bit PCI gigabit adapter (SX, LX or Tx)
- Probe software
- TAP
- All required cabling

The Probe Kit is designed to be installed into a user-provided WinTel system. Once integrated into a system, the gigabit Probe will report to any Expert Observer or Observer Suite console. All Probe Kits include a 10/100 Ethernet adapter link for out of band communication to the Observer console, or 10/100 analysis.

2. A 19" Rack-Mount Complete Probe (for local or remote use)

Rack-mount Probes integrate a Gigabit Probe Kit (see above) into an industry standard rack-mount system completely configured and ready for wire-speed, full-duplex analysis. The rack-mount system runs Windows 2000 Professional and the gigabit Probe software.

WAN Probes

Hardware-based WAN Probes are designed to passively capture WAN traffic and provide a direct link into the data stream, offering an independent and trusted view of WAN traffic. A complete range of WAN Probe configurations are available to accommodate most any type of WAN circuit.

WAN Probes offer complete inline monitoring, decode and flow/error statistics for WAN traffic, as well as all payload data, at links up to DS3/T3/E3 speeds. WAN Probes report to any Expert Observer or Observer Suite console.

WAN Probes include passive TAPs that provide a copy of the traffic while maintaining the signal through the WAN link. Once a TAP is added to a link, the Probe can be attached or removed without interruption of the WAN data flow.

WAN Probes are based on the Windows 2000/XP environment and integrate perfectly with all security and policy based schemes that may be in place. As with all Network Instruments products—if you know how to administer Windows, you already know how to work with Network Instruments hardware.

Hardware-Based WAN Probes are available in two formats:

1. WAN Probe Kits

The WAN Probe Kit includes:

- WAN adapter (T1/E1 or DS3/HSSI/T3/E3, Serial or Digital)
- Probe software
- TAP
- All required cabling

Probe Kits are designed to be installed into a user provided WinTel system. WAN Probe Kits have configurations for one or multiple WAN links. All Probe Kits include a 10/100 Ethernet link for out of band communication to the Observer console or 10/100 analysis.



WAN Probe Kit

2. 19" Rack-Mount WAN Probe

The Rack-mount Probe integrates a WAN Probe Kit (see above) into an industry standard rack-mount system completely configured and ready to use. The rack-mount system runs Windows 2000 Professional and WAN Probe software.

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Software-Based Probe Minimum System Requirements

System Requirements: Pentium 266 w/64MB RAM, Windows 98 and a supported network adapter.

Platforms: For Ethernet, Token Ring - Windows 98/NT 4.x/2000/XP. For Wireless 802.11 and FDDI - Windows 2000 and XP.

Topologies: Advanced Probe: Ethernet (10/100/Gigabit), Wireless 802.11b/a, Token Ring (4/16/100), FDDI. RMON Probe: Ethernet (10/100/Gigabit) and Token Ring (4/16).

Switch Requirements (Advanced Probe only): Switch must support port mirroring and have telnet or SNMP management interface that can control the port mirroring.

Network Interface Cards Supported: Any network adapter card with a NDIS 5.x/4.x/3.x driver that supports promiscuous mode. For Wireless 802.11b Cisco Aironet 340-350, Symbol Spectrum24-41x1, Intel 2011b and Nortel 41x1 adapters or compatible. For 802.11a Proxim Harmony adapters.

Gigabit Probes provide the console with the following functionality:

- **Full-duplex, wire-speed** gigabit capture and statistics
- **Gigabit analysis** and real-time Expert system
- **See an independent view of your gigabit data flow**
- **Completely passive analysis option** – will not interfere with your gigabit data flow
- **Insert and remove the analyzer** without disruption of gigabit network
- **Full Support** for jumbo frames

WAN Probes provide the console with the following functionality:

- **Real-time statistics** for capacity planning and provider performance measurement
- **Real-time error displays** for congestion determinations
- **Pinpoint WAN flow problems** before they become WAN flow disasters
- **Long-term Trending** for reporting and baselining
- **Complete capture and decode** of all WAN traffic
- **WAN speeds** up to DS3 supported
- **Demarcation-point (digital)** or between CSU/DSU and router (serial) monitoring options
- **Passive solution** based on non-intrusive TAPs that can be left inline for easy insertion and removal of the analyzer without interruption of the data flow

Hardware-Based Probe System Requirements

Gigabit Probe Kit: For wire-speed analysis, a dual processor based system running at 1.2 Ghz (or more) with a free 64-bit PCI slot (66 Mhz slot 64-bit bus speed), a free 32-bit PCI slot (for the 10/100 adapter), 512MB RAM, CD, keyboard and mouse and Windows 2000/XP.

WAN Probe Kit: For wire-speed analysis, a WinTel based system running at 800 Mhz (or more), two free 32-bit PCI slots (for the WAN adapter and a 10/100 adapter), 512MB RAM, CD, keyboard and mouse and Windows 2000/XP. Once installed into the above described system, a Probe will report to any Expert Observer or Observer Suite console (at least one console is required for analysis).

19" Rack-Mount Probe (gigabit or WAN): The rack-mount Probe is a complete system, and only requires a copy of Expert Observer or Observer Suite to report to.

Gigabit or WAN Probes will report to any Expert Observer or Observer Suite console (at least one console is required for analysis).

WAN Probe Speed/Link Options

For Link Speeds up to T1/E1: 1-Port Serial (V.35, RS232/EIA530/V.24, RS449, X.21/V.11/R.422), 2-Port Digital (RJ45), 4-Port Digital (RJ45)

For DS3/T3/E3 Links: 1-Port Serial (HSSI), 1-Port Digital (Coax)

Encapsulation Supported – HDLC-Cisco, Frame Relay (IETF & Cisco), PPP, LAPB modulo128, LAPB Modulo 8, X.25 (over LAPB modulo128), X.25 (over LAPB Modulo 8) and ATM-DXI (ATM Data Exchange)



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